

**IN THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-23 (Canceled)

24. (New) A semiconductor device comprising:

a semiconductor film;

a pair of first impurity regions being formed in the semiconductor film;

an active region formed between the pair of first impurity regions in the semiconductor film;

a second impurity region formed partly in said crystal semiconductor film between the pair of impurity regions;

a floating gate formed over and insulated from the active region; and

a control gate formed over and insulated from the floating gate,

wherein the floating gate overlaps a boundary between at least one of the pair of the first impurity regions and the second impurity region .

25. (New) A semiconductor device according to claim 24, wherein the second impurity region has a striped shape.

26. (New) A semiconductor device according to claim 24, wherein the second impurity regions has a dot-like shape.

27. (New) A semiconductor device according to claim 24, wherein the second impurity regions has an elliptical shape.

28. (New) A semiconductor device according to claim 24, wherein an electronic device mounting the semiconductor device is any one of a mobile computer, a head-mounted display, a video camera, a cellular phone, a digital camera, a rear type projector, a front type projector.

29. (New) A semiconductor device comprising:  
a NOR type circuit having a plurality of memory transistors, the memory transistor comprising:  
a semiconductor film;  
a pair of first impurity regions being formed in the semiconductor film;  
an active region formed between the pair of first impurity regions in the semiconductor film;  
a second impurity region formed partly in said semiconductor film between the pair of impurity regions;  
a floating gate formed over and insulated from the active region; and  
a control gate formed over and insulated from the floating gate,  
wherein the floating gate overlaps a boundary between at least one of the pair of the first impurity regions and the second impurity region .

30. (New) A semiconductor device according to claim 29, wherein the second impurity region has a striped shape.

31. (New) A semiconductor device according to claim 29, wherein the second impurity regions

has a dot-like shape.

32. (New) A semiconductor device according to claim 29, wherein the second impurity regions has an elliptical shape.

33. (New) A semiconductor device according to claim 29, wherein an electronic device mounting the semiconductor device is any one of a mobile computer, a head-mounted display, a video camera, a cellular phone, a digital camera, a rear type projector, a front type projector.

34. (New) A semiconductor device comprising:

- a NAND type circuit having a plurality of one memory transistor, the memory transistor comprising:
  - a semiconductor film;
  - a pair of first impurity regions being formed in the semiconductor film;
  - an active region formed between the pair of first impurity regions in the semiconductor film;
  - a second impurity region formed partly in said crystal semiconductor film between the pair of impurity regions;
  - a floating gate formed over and insulated from the active region; and
  - a control gate formed over and insulated from the floating gate,
- wherein the floating gate overlaps a boundary between at least one of the pair of the first impurity regions and the second impurity region .

35. (New) A semiconductor device according to claim 34, wherein the second impurity region has a striped shape.

36. (New) A semiconductor device according to claim 34, wherein the second impurity regions has a dot-like shape.

37. (New) A semiconductor device according to claim 34, wherein the second impurity regions has an elliptical shape.

38. (New) A semiconductor device according to claim 34, wherein an electronic device mounting the semiconductor device is any one of a mobile computer, a head-mounted display, a video camera, a cellular phone, a digital camera, a rear type projector, a front type projector.

39. (New) A semiconductor device comprising:

- a substrate having an insulating surface;
- a semiconductor film provided over the substrate;
- a pair of first impurity regions being formed in the semiconductor;
- an active region formed between the pair of first impurity regions in the semiconductor film;
- a second impurity region formed partly in said crystal semiconductor film between the pair of impurity regions;
- a floating gate formed over and insulated from the active region; and
- a control gate formed over and insulated from the floating gate,

wherein the floating gate overlaps a boundary between at least one of the pair of the first impurity regions and the second impurity region .

40. (New) A semiconductor device according to claim 39, wherein the second impurity region has a striped shape.

41. (New) A semiconductor device according to claim 39, wherein the second impurity regions has a dot-like shape.

42. (New) A semiconductor device according to claim 39, wherein the second impurity regions has an elliptical shape.

43. (New) A semiconductor device according to claim 39, wherein an electronic device mounting the semiconductor device is any one of a mobile computer, a head-mounted display, a video camera, a cellular phone, a digital camera, a rear type projector, a front type projector.

44. (New) A semiconductor device comprising:  
a NOR type circuit having a plurality of memory transistors, the memory transistor comprising:  
a substrate having an insulating surface;  
a semiconductor film provided over the substrate;  
a pair of first impurity regions being formed in the semiconductor film;  
an active region formed between the pair of first impurity regions in the

semiconductor film;

a second impurity region formed partly in said semiconductor film between the pair of impurity regions;

a floating gate formed over and insulated from the active region; and

a control gate formed over and insulated from the floating gate,

wherein the floating gate overlaps a boundary between at least one of the pair of the first impurity regions and the second impurity region .

45. (New) A semiconductor device according to claim 44, wherein the second impurity region has a striped shape.

46. (New) A semiconductor device according to claim 44, wherein the second impurity regions has a dot-like shape.

47. (New) A semiconductor device according to claim 44, wherein the second impurity regions has an elliptical shape.

48. (New) A semiconductor device according to claim 44, wherein an electronic device mounting the semiconductor device is any one of a mobile computer, a head-mounted display, a video camera, a cellular phone, a digital camera, a rear type projector, a front type projector.

49. (New) A semiconductor device comprising:

a NAND type circuit having a plurality of one memory transistor, the memory

transistor comprising:

- a substrate having an insulating surface;
  - a semiconductor film provided over the substrate;
  - a pair of first impurity regions being formed in the semiconductor film;
  - an active region formed between the pair of first impurity regions in the semiconductor film;
  - a second impurity region formed partly in said crystal semiconductor film between the pair of impurity regions;
  - a floating gate formed over and insulated from the active region; and
  - a control gate formed over and insulated from the floating gate,
- wherein the floating gate overlaps a boundary between at least one of the pair of the first impurity regions and the second impurity region .

50. (New) A semiconductor device according to claim 49, wherein the second impurity region has a striped shape.

51. (New) A semiconductor device according to claim 49, wherein the second impurity regions has a dot-like shape.

52. (New) A semiconductor device according to claim 49, wherein the second impurity regions has an elliptical shape.

53. (New) A semiconductor device according to claim 49, wherein an electronic device

mounting the semiconductor device is any one of a mobile computer, a head-mounted display, a video camera, a cellular phone, a digital camera, a rear type projector, a front type projector.